





## Self-regulating electric glow plug

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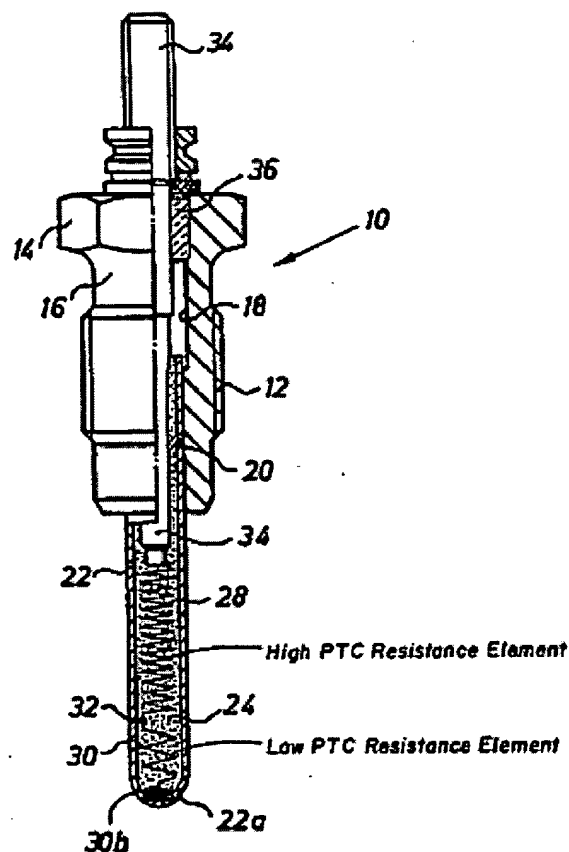
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Abstract not available for DE2802625  
Abstract of corresponding document: **US4556781**

A self-regulating electric glow plug for an air-compressing internal combustion engine includes an elongated tube having a first end arranged within a plug housing and a second closed end defining a tubular component adapted to extend into a combustion chamber of the engine to produce heat when heated to a glowing condition. A coiled electric resistance heating element is disposed entirely within the tubular component and is embedded in a mass of thermally conductive electrical filling the tube. The resistance element includes two oppositely wound resistance wire coils connected in an end-to-end serially connected array with the first coil being located closest to the glow plug housing and the second coil being located closest to the closed tube end. The first coil has a higher positive temperature coefficient of resistance than the second coil. The second coil defines a heating element for the combustion chamber of the engine and has the capability of heating the entire tubular component in which the coils are located to incandescence within three to five seconds after being energized. The first coil is thus affected not only by internal heat produced by the current flow through it but also by the heat from the tubular component heated to incandescence by the second coil so that the resistance of the first coil increases rapidly to reduce the initially high current flow through the serially connected coils and prevent overheating of the glow plug.



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**US Design Patent**

D0318249

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**US Reissue**

RE35312

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H1523

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**Patent Abstract**GER 1980-04-30 02802625 **GLOW PLUG****INVENTOR-** BAUER, PAUL, 7141 STEINHEIM**APPLICANT-** BERU-WERK ALBERT RUPRECHT GMBH & CO KG, 7140 LUDWIGSBURG**PATENT NUMBER-** 02802625/DE-B2**PATENT APPLICATION NUMBER-** 02802625**DATE FILED-** 1978-01-21**DOCUMENT TYPE-** B2, DOCUMENT LAID OPEN (SECOND PUBL.)**PUBLICATION DATE-** 1980-04-30**INTERNATIONAL PATENT CLASS-** F02P01900; F23Q00700; F23Q00700B**PATENT APPLICATION PRIORITY-** 2802625, A**PRIORITY COUNTRY CODE-** DE, Germany, Ged. Rep. of**PRIORITY DATE-** 1978-01-21**FILING LANGUAGE-** German**LANGUAGE-** German NDN- 203-0011-4519-2

**EXEMPLARY CLAIMS-** 1. Glflhkerze for air-consolidating internal-combustion engines by a candle housing, by to this candle housing fastened and as glow pin a serving construction unit and by a connection device for glowing Rome, which is connected with a resistance adjusting glowing Rome whereby the resistance in row with a heating element lies and opposite the heating element a higher positive temperature resistance coefficient exhibits, thereby marked that the Gluehsueft on consists well-known tubular construction unit of one for itself, in its end turned away from the Kerzengehiuse is locked and that both glowing

Rome adjusting resistance and the heating element from ever a resistance turn (28; 30) exist and both resistance spirals (28; 30) in the glow pin arranged and are packed in insulant. 2. Glow plug according to requirement i, by the fact characterized that of the resistance spirals (28; 30) are opposite.

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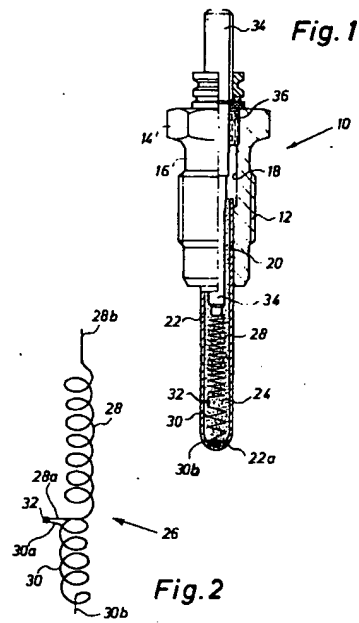
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Es ist ohne weiteres ersichtlich, daß durch geeignete Variation der Wendzeit und ihrer Werkstoffe die Aufheiz- bzw. Vorheizzeit der Glühkerze und ihrer Glühtemperatur den jeweiligen Wünschen angepaßt werden kann.

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